

**Listing Claims:**

Claims 1-7 (cancelled)

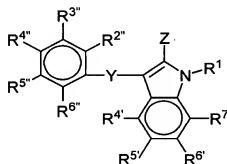
Claims 8-9 (withdrawn)

Claims 10-11 (cancelled)

Claims 12-13 (withdrawn)

Claims 14-18 (cancelled)

Claim 19 (currently amended): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R¹ is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH-(CH₂)<sub>p</sub>-(amino acid); or -(CH₂)<sub>p</sub>-(amino acid);

R⁴, R⁵, R⁶, R⁷, R², R³, R⁴, R⁵ and R⁶ are each independently H; halo; -NO₂; -CN; -OH; -OR²; -SH; -SR²; -NH₂; -NHR²; -NR²R³; -NHSO₂-C₁-₃alkyl; -NR²SO₂-C₁-₃alkyl; -NHCO-C₁-₃alkyl; -NR²CO-C₁-₃alkyl; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH₃; CF₃; vinyl bromide; -CR²R²-S(O)<sub>n</sub>-R³; -CR²R²NH₂; -CR²R²NHR²; -CR²R²NR²R³; -CR²R²-C(=O)R²; alkacyl; optionally substituted or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R²; -C(=W)R²; -C(=O)OH; -C(=W)OH; -C(=O)OR²; -C(=W)OR²; -C(=O)SH; -C(=W)SH; -C(=O)SR²; -C(=W)SR²; -C(=O)NH₂; -C(=W)NH₂; -C(=O)NHR²; -C(=W)NHR²; -C(=O)NR²R³; -C(=W)NR²R³; -C(=W)NH(CH₂)<sub>p</sub>-(amino acid); an amino acid; or -(CH₂)<sub>p</sub>-(amino acid);

wherein if  $R^{5c}$  is F, Cl, Br,  $NO_2$ , CN,  $OR^2$ ,  $NR^2R^3$ ,  $NHSO_2-C_{1-3}alkyl$ ; or  $NHCO-C_{1-3}alkyl$ , then at least one of  $R^{4c}$ ,  $R^{6c}$  and  $R^{7c}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-C(=O)NH_2$ ;  $-C(=W)-NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid;  $-(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)-OR^2$ ;  $-C(=O)-SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ; CN; or halo;

Y is O; S(O) or S(O)<sub>2</sub>;

each W is independently O; S; NH;  $NR^2$ ;  $-NR^2R^2$ ;  $-N-CN$ ;  $-N-NH_2$ ;  $-N-NHR^2$ ;  $-N-NR^2R^3$ ;  $-N-OH$ ; or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; or vinyl bromide;

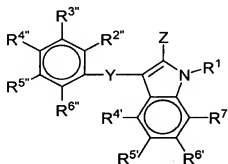
each  $R^3$  is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^2$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^2$ ;  $-CR^2R^2-C(=O)R^2$ ; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen;  $-OH$ ;  $-OR^2$ ;  $-SH$ ;  $-SR^2$ ; oxime; hydrazine;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)-NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^2$ ;  $-C(=W)-NR^2R^3$ ;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^3$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NR^2SO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ;  $-NR^2CO-C_{1-3}alkyl$ ;  $-S(O)_n-R^3$ ;  $C_{1-3}alkoxy$ ;  $C_{1-3}thioether$ ; or an amino acid residue; optionally in a pharmaceutically acceptable carrier or diluent.

Claim 20 (currently amended): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

$R^1$  is hydrogen; acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH-(CH_2)_p$ -(amino acid); or  $-(CH_2)_p$ -(amino acid);

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H; halo;  $-NO_2$ ;  $-CN$ ;  $-OH$ ;  $-OR^2$ ;  $-SH$ ;  $-SR^2$ ;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^3$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NR^2SO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ;  $-NR^2CO-C_{1-3}alkyl$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ; alkacyl; optionally substituted or unsubstituted acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or  $-(CH_2)_p$ -(amino acid);

wherein if  $R^5$  is F, Cl, Br,  $-NO_2$ ,  $-CN$ ,  $-OR^2$ ,  $-NR^2R^3$ ,  $-NHSO_2-C_{1-3}alkyl$ ; or  $-NHCO-C_{1-3}alkyl$ , then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively, wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid;  $-(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ;  $-CN$ ; or halo;

Y is O; S(O) or S(O)<sub>2</sub>;

each W is independently O; S; NH; NR<sup>2</sup>; -NR<sup>2</sup>R<sup>2</sup>; -N-CN; -N-NH<sub>2</sub>; -N-NHR<sup>2</sup>; -N-NR<sup>2</sup>R<sup>3</sup>; -N-OH; or -N-OR<sup>2</sup>;

each R<sup>2</sup> is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl; CH<sub>3</sub>; CF<sub>3</sub>; or vinyl bromide;

each R<sup>3</sup> is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH<sub>3</sub>; CF<sub>3</sub>; vinyl bromide; -CR<sup>2</sup>R<sup>2</sup>-S(O)<sub>n</sub>-R<sup>2</sup>; -CR<sup>2</sup>R<sup>2</sup>NH<sub>2</sub>; -CR<sup>2</sup>R<sup>2</sup>NHR<sup>2</sup>; -CR<sup>2</sup>R<sup>2</sup>NR<sup>2</sup>R<sup>2</sup>; -CR<sup>2</sup>R<sup>2</sup>-C(=O)R<sup>2</sup>; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH; -OR<sup>2</sup>; -SH; -SR<sup>2</sup>; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH; -C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>; -C(=O)NH<sub>2</sub>; -C(=W)NH<sub>2</sub>; -C(=O)-NHR<sup>2</sup>; -C(=W)NHR<sup>2</sup>; -C(=O)NR<sup>2</sup>R<sup>3</sup>; -C(=W)-NR<sup>2</sup>R<sup>3</sup>; -NH<sub>2</sub>; -NHR<sup>2</sup>; -NR<sup>2</sup>R<sup>3</sup>; -NHSO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NHCO-C<sub>3</sub>alkyl; -NR<sup>2</sup>CO-C<sub>1-3</sub>alkyl; -S(O)<sub>n</sub>-R<sup>3</sup>; C<sub>1-3</sub> alkoxy; C<sub>1-3</sub>thioether; or an amino acid residue;

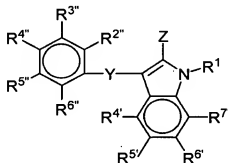
in combination and/or alternation with one or more other anti-HIV agent, optionally in a pharmaceutically acceptable carrier or diluent.

Claim 21(original): The method of claim 20, wherein the other anti-HIV agent is a reverse transcriptase inhibitor.

Claim 22 (original): The method of claim 21, wherein the reverse transcriptase inhibitor induces a mutation lysine 103 → asparagine and/or tyrosine 181 → cysteine in HIV reverse transcriptase.

Claim 23 (currently amended): A method for the treatment of an HIV-infection in a host, wherein the HIV has a mutation at lysine 103 → asparagine and/or tyrosine 181 → cysteine

in HIV reverse transcriptase, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

$R^1$  is hydrogen; acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH-(CH_2)_p$ -(amino acid); or  $-(CH_2)_p$ -(amino acid);

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H; halo;  $-NO_2$ ;  $-CN$ ;  $-OH$ ;  $-OR^2$ ;  $-SH$ ;  $-SR^2$ ;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^3$ ;  $-NHSO_2C_{1-3}alkyl$ ;  $-NR^2SO_2C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ;  $-NR^2CO-C_{1-3}alkyl$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ; alkacyl; optionally substituted or unsubstituted acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or  $-(CH_2)_p$ -(amino acid);

wherein if  $R^{5''}$  is F, Cl, Br,  $-NO_2$ ,  $-CN$ ,  $-OR^2$ ,  $-NR^2R^3$ ,  $-NHSO_2C_{1-3}alkyl$ ; or  $-NHCO-C_{1-3}alkyl$ , then at least one of  $R^{4''}$ ,  $R^{6''}$  and  $R^{7''}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4''}$ ,  $R^{5''}$ ,  $R^{6''}$ ,  $R^{7''}$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid;  $-(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ;  $-CN$ ; or halo;

Y is O; S(O) or S(O)<sub>2</sub>;

each W is independently O; S;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^2$ ;  $-N-CN$ ;  $-N-NH_2$ ;  $-N-NHR^2$ ;  $-N-NR^2R^3$ ;  $-N-OH$ ; or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; or vinyl bromide;

each  $R^3$  is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^2$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^2$ ;  $-CR^2R^2-C(=O)R^2$ ; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

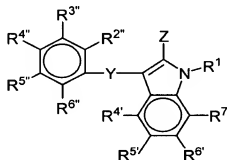
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen;  $-OH$ ;  $-OR^2$ ;  $-SH$ ;  $-SR^2$ ; oxime; hydrazine;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)-NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)-NR^2R^3$ ;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^3$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NR^2SO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ;  $-NR^2CO-C_{1-3}alkyl$ ;  $-S(O)_n-R^3$ ;  $C_{1-3}alkoxy$ ;  $C_{1-3}thioether$ ; or an amino acid residue;

optionally in a pharmaceutically acceptable carrier or diluent.

Claim 24 (currently amended): A method for the treatment of an HIV-infection in a host, wherein the HIV is resistant to one or more reverse transcriptase ~~inhibitors~~ inhibitors, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

$R^1$  is hydrogen; acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); or  $-(CH_2)_p$ -(amino acid);

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^{2'}$ ,  $R^3$ ,  $R^{4'}$ ,  $R^{5'}$  and  $R^{6'}$  are each independently H; halo;  $-NO_2$ ;  $-CN$ ;  $-OH$ ;  $-OR^2$ ;  $-SH$ ;  $-SR^2$ ;  $-NH_2$ ;  $-NHR^2$ ;  $-NR^2R^3$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NR^2SO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ;  $-NR^2CO-C_{1-3}alkyl$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ; alkacyl; optionally substituted or unsubstituted acyl;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or  $-(CH_2)_p$ -(amino acid);

wherein if  $R^{5'}$  is F, Cl, Br,  $-NO_2$ ,  $-CN$ ,  $-OR^2$ ,  $-NR^2R^3$ ,  $-NHSO_2-C_{1-3}alkyl$ ; or  $-NHCO-C_{1-3}alkyl$ , then at least one of  $R^{4'}$ ,  $R^{6'}$  and  $R^{7'}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid;  $-(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ;  $-CN$ ; or halo;

Y is O;  $S(O)$  or  $S(O)_2$ ;

each W is independently O; S; NH;  $NR^2$ ;  $-NR^2R^2$ ;  $-N-CN$ ;  $-N-NH_2$ ;  $-N-NHR^2$ ;  $-N-NR^2R^3$ ;  $-N-OH$ ; or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; or vinyl bromide;

each  $R^3$  is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^2$ ;  $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^2$ ;  $-CR^2R^2-C(=O)R^2$ ; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted

or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle;  
optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted  
heterocycle-alkyl;

each n is independently 0, 1 or 2;

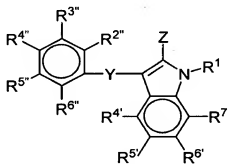
each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl,  
lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle;  
arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH;  
-OR<sup>2</sup>; -SH; -SR<sup>2</sup>; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH;  
-C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>;  
-C(=O)NH<sub>2</sub>; -C(=W)NH<sub>2</sub>; -C(=O)-NHR<sup>2</sup>; -C(=W)NHR<sup>2</sup>; -C(=O)NR<sup>2</sup>R<sup>3</sup>; -C(=W)-NR<sup>2</sup>R<sup>3</sup>;  
-NH<sub>2</sub>; -NHR<sup>2</sup>; -NR<sup>2</sup>R<sup>3</sup>; -NHSO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NHCO-C<sub>1-3</sub>alkyl;  
-NR<sup>2</sup>CO-C<sub>1-3</sub>alkyl; -S(O)<sub>n</sub>-R<sup>3</sup>; C<sub>1-3</sub> alkoxy; C<sub>1-3</sub>thioether; or an amino acid residue;

in combination and/or alternation with one or more other anti-HIV agent, optionally  
in a pharmaceutically acceptable carrier or diluent.

Claims 25-26 (withdrawn)

Claim 27 (currently amended): A method for the treatment of an HIV-infection in a host,  
wherein the HIV is resistant to one or more reverse transcriptase ~~inhibitor(s)~~ inhibitors,  
comprising administering to said host an effective anti-HIV treatment amount of a compound  
of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R<sup>1</sup> is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH;  
-C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>;  
-C(=O)NH<sub>2</sub>; -C(=W)NH<sub>2</sub>; -C(=O)NHR<sup>2</sup>; -C(=W)NHR<sup>2</sup>; -C(=O)NR<sup>2</sup>R<sup>3</sup>; -C(=W)NR<sup>2</sup>R<sup>3</sup>;  
-C(=W)NH-(CH<sub>2</sub>)<sub>p</sub>-(amino acid); or -(CH<sub>2</sub>)<sub>p</sub>-(amino acid);



$R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$ ,  $R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OH}$ ;  $-\text{OR}^2$ ;  $-\text{SH}$ ;  $-\text{SR}^2$ ;  $-\text{NH}_2$ ;  $-\text{NHR}^2$ ;  $-\text{NR}^2\text{R}^3$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NR}^2\text{SO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ;  $-\text{NR}^2\text{CO-C}_{1-3}\text{alkyl}$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $\text{CH}_3$ ;  $\text{CF}_3$ ; vinyl bromide;  $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^3$ ;  $-\text{CR}^2\text{R}^2\text{NH}_2$ ;  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ;  $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^3$ ;  $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$ ; alkacyl; optionally substituted or unsubstituted acyl;  $-\text{C(=O)H}$ ;  $-\text{C(=W)H}$ ;  $-\text{C(=O)R}^2$ ;  $-\text{C(=W)R}^2$ ;  $-\text{C(=O)OH}$ ;  $-\text{C(=W)OH}$ ;  $-\text{C(=O)OR}^2$ ;  $-\text{C(=W)OR}^2$ ;  $-\text{C(=O)SH}$ ;  $-\text{C(=W)SH}$ ;  $-\text{C(=O)SR}^2$ ;  $-\text{C(=W)SR}^2$ ;  $-\text{C(=O)NH}_2$ ;  $-\text{C(=W)NH}_2$ ;  $-\text{C(=O)NHR}^2$ ;  $-\text{C(=W)NHR}^2$ ;  $-\text{C(=O)NR}^2\text{R}^3$ ;  $-\text{C(=W)NR}^2\text{R}^3$ ;  $-\text{C(=W)NH(CH}_2)_p\text{(amino acid)}$ ; an amino acid; or  $-(\text{CH}_2)_p\text{(amino acid)}$ ;  
wherein if  $R^{5'}$  is F, Cl, Br,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{OR}^2$ ,  $-\text{NR}^2\text{R}^3$ ,  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ; or  $-\text{NHCO-C}_{1-3}\text{alkyl}$ , then at least one of  $R^{4'}$ ,  $R^{6'}$  and  $R^{7'}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-\text{C(=O)NH}_2$ ;  $-\text{C(=W)NH}_2$ ;  $-\text{C(=O)NHR}^2$ ;  $-\text{C(=W)NHR}^2$ ;  $-\text{C(=O)NR}^2\text{R}^3$ ;  $-\text{C(=W)NR}^2\text{R}^3$ ;  $-\text{C(=W)NH(CH}_2)_p\text{(amino acid)}$ ; an amino acid;  $-(\text{CH}_2)_p\text{(amino acid)}$ ;  $-\text{C(=O)R}^3$ ;  $-\text{C(=O)H}$ ;  $-\text{C(=W)H}$ ;  $-\text{C(=O)R}^2$ ;  $-\text{C(=W)R}^2$ ;  $-\text{C(=O)OR}^3$ ;  $-\text{C(=O)OH}$ ;  $-\text{C(=W)OH}$ ;  $-\text{C(=O)OR}^2$ ;  $-\text{C(=W)OR}^2$ ;  $-\text{C(=O)SH}$ ;  $-\text{C(=W)SH}$ ;  $-\text{C(=O)SR}^2$ ;  $-\text{C(=W)SR}^2$ ; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $\text{CH}_3$ ;  $\text{CF}_3$ ; vinyl bromide;  $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^3$ ;  $-\text{CR}^2\text{R}^2\text{NH}_2$ ;  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ;  $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^3$ ;  $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$ ;  $-\text{CN}$ ; or halo;

Y is O; S(O) or S(O)<sub>2</sub>;

each W is independently O; S; NH;  $\text{NR}^2$ ;  $-\text{NR}^2\text{R}^2$ ;  $-\text{N-CN}$ ;  $-\text{N-NH}_2$ ;  $-\text{N-NHR}^2$ ;  $-\text{N-NR}^2\text{R}^3$ ;  $-\text{N-OH}$ ; or  $-\text{N-OR}^2$ ;

each  $R^2$  is independently hydrogen; an optionally substituted or unsubstituted branched or unbranched lower alkyl, alkenyl or alkynyl;  $\text{CH}_3$ ;  $\text{CF}_3$ ; or vinyl bromide;

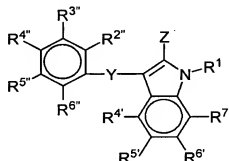
each  $R^3$  is independently hydrogen; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl;  $\text{CH}_3$ ;  $\text{CF}_3$ ; vinyl bromide;  $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^2$ ;  $-\text{CR}^2\text{R}^2\text{NH}_2$ ;  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ;  $-\text{CR}^2\text{R}^2\text{NR}^2\text{R}^2$ ;  $-\text{CR}^2\text{R}^2\text{-C(=O)R}^2$ ; optionally substituted or unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle; optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl, lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle; arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen; -OH; -OR<sup>2</sup>; -SH; -SR<sup>2</sup>; oxime; hydrazine; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH; -C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>; -C(=O)NH<sub>2</sub>; -C(=W)NH<sub>2</sub>; -C(=O)-NHR<sup>2</sup>; -C(=W)NHR<sup>2</sup>; -C(=O)NR<sup>2</sup>R<sup>3</sup>; -C(=W)-NR<sup>2</sup>R<sup>3</sup>; -NH<sub>2</sub>; -NHR<sup>2</sup>; -NR<sup>2</sup>R<sup>3</sup>; -NHSO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NHCO-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>CO-C<sub>1-3</sub>alkyl; -S(O)<sub>n</sub>-R<sup>3</sup>; C<sub>1-3</sub> alkoxy; C<sub>1-3</sub>thioether; or an amino acid residue; optionally in a pharmaceutically acceptable carrier or diluent.

Claim 28 (currently amended): A method for the treatment of an HIV-infection in a host, wherein the HIV has a mutation at lysine 103 → asparagine and/or tyrosine 181 → cysteine in HIV reverse transcriptase, comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein

R<sup>1</sup> is hydrogen; acyl; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH; -C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>; -C(=O)NH<sub>2</sub>; -C(=W)NH<sub>2</sub>; -C(=O)NHR<sup>2</sup>; -C(=W)NHR<sup>2</sup>; -C(=O)NR<sup>2</sup>R<sup>3</sup>; -C(=W)NR<sup>2</sup>R<sup>3</sup>; -C(=W)NH-(CH<sub>2</sub>)<sub>p</sub>-(amino acid); or -(CH<sub>2</sub>)<sub>p</sub>-(amino acid);

R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup>, R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently H; halo; -NO<sub>2</sub>; -CN; -OH; -OR<sup>2</sup>; -SH; -SR<sup>2</sup>; -NH<sub>2</sub>; -NHR<sup>2</sup>; -NR<sup>2</sup>R<sup>3</sup>; -NHSO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NHCO-C<sub>1-3</sub>alkyl; -NR<sup>2</sup>CO-C<sub>1-3</sub>alkyl; optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl; CH<sub>3</sub>; CF<sub>3</sub>; vinyl bromide; -CR<sup>2</sup>R<sup>2</sup>-S(O)<sub>n</sub>-R<sup>3</sup>; -CR<sup>2</sup>R<sup>2</sup>NH<sub>2</sub>; -CR<sup>2</sup>R<sup>2</sup>NHR<sup>2</sup>; -CR<sup>2</sup>R<sup>2</sup>NR<sup>2</sup>R<sup>3</sup>; -CR<sup>2</sup>R<sup>2</sup>-C(=O)R<sup>2</sup>; alkacyl; optionally substituted or unsubstituted acyl; -C(=O)H; -C(=W)H; -C(=O)R<sup>2</sup>; -C(=W)R<sup>2</sup>; -C(=O)OH; -C(=W)OH; -C(=O)OR<sup>2</sup>; -C(=W)OR<sup>2</sup>; -C(=O)-SH; -C(=W)SH; -C(=O)SR<sup>2</sup>; -C(=W)SR<sup>2</sup>; -C(=O)NH<sub>2</sub>;

$-C(=W)NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)-NR^2R^3$ ;  
 $-C(=W)NH(CH_2)_p$ -(amino acid); an amino acid; or  $-(CH_2)_p$ -(amino acid);  
wherein if  $R^5$  is F, Cl, Br,  $NO_2$ ,  $CN$ ,  $OR^3$ ,  $NR^2R^3$ ,  $NHSO_2$ - $C_{1-3}$ alkyl; or  
 ~~$NHCO$ - $C_{1-3}$ alkyl, then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively,~~  
wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is optionally substituted or unsubstituted acyl,  $-C(=O)NH_2$ ;  $-C(=W)-NH_2$ ;  
 $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino  
acid); an amino acid;  $-(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  
 $-C(=W)R^2$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)-OR^2$ ;  $-C(=O)-SH$ ;  
 $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ; optionally substituted or unsubstituted branched or  
unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^3$ ;  
 $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $CR^2R^2NR^2R^3$ ;  $-CR^2R^2-C(=O)R^2$ ;  $-CN$ ; or halo;

Y is O; S(O) or S(O)<sub>2</sub>;

each W is independently O; S; NH;  $NR^2$ ;  $-NR^2R^2$ ;  $-N-CN$ ;  $-N-NH_2$ ;  $-N-NHR^2$ ;  
 $-N-NR^2R^3$ ;  $-N-OH$ ; or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen; an optionally substituted or unsubstituted  
branched or unbranched lower alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; or vinyl bromide;

each  $R^3$  is independently hydrogen; optionally substituted or unsubstituted branched  
or unbranched alkyl, alkenyl or alkynyl;  $CH_3$ ;  $CF_3$ ; vinyl bromide;  $-CR^2R^2-S(O)_n-R^2$ ;  
 $-CR^2R^2NH_2$ ;  $-CR^2R^2NHR^2$ ;  $-CR^2R^2NR^2R^2$ ;  $-CR^2R^2-C(=O)R^2$ ; optionally substituted or  
unsubstituted aryl; optionally substituted or unsubstituted heterocycle; optionally substituted  
or unsubstituted alkylaryl; optionally substituted or unsubstituted alkylheterocycle;  
optionally substituted or unsubstituted aralkyl; or optionally substituted or unsubstituted  
heterocycle-alkyl;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

wherein the optionally substituted branched or unbranched alkyl, alkenyl, alkynyl,  
lower alkyl, lower alkenyl; lower alkynyl; acyl; aryl; heterocycle; alkaryl; alkylheterocycle;  
arylalkyl; or alkylheterocycle optionally is substituted with one or more of halogen;  $-OH$ ;  
 $-OR^2$ ;  $-SH$ ;  $-SR^2$ ; oxime; hydrazine;  $-C(=O)H$ ;  $-C(=W)H$ ;  $-C(=O)R^2$ ;  $-C(=W)R^2$ ;  $-C(=O)OH$ ;  
 $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)OR^2$ ;  $-C(=O)SH$ ;  $-C(=W)SH$ ;  $-C(=O)SR^2$ ;  $-C(=W)SR^2$ ;  
 $-C(=O)NH_2$ ;  $-C(=W)NH_2$ ;  $-C(=O)-NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)-NR^2R^3$ ;

$-\text{NH}_2$ ;  $-\text{NHR}^2$ ;  $-\text{NR}^2\text{R}^3$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NR}^2\text{SO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ;  
 $-\text{NR}^2\text{CO-C}_{1-3}\text{alkyl}$ ;  $-\text{S(O)}_n\text{-R}$ ;  $\text{C}_{1-3}$  alkoxy;  $\text{C}_{1-3}$  thioether; or an amino acid residue;  
in combination and/or alternation with one or more other anti-HIV agent, optionally  
in a pharmaceutically acceptable carrier or diluent.

Claim 29 (original): The method of any one of claims 19-28 wherein the host is a human.

Claim 30 (currently amended): The method of any one of claims 19 or 24 wherein:

$\text{R}^1$  is hydrogen;

$\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$ ,  $\text{R}^7$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NR}^2\text{R}^3$ ;  
 $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine, or  $\text{C}_{1-3}$  alkyl or alkenyl optionally  
substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-3}$  alkoxy or  
 $\text{C}_{1-3}$  thioether, wherein if  $\text{R}^{5'}$  is  $\text{F}$ ,  $\text{Cl}$ ,  $\text{Br}$ ,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{OR}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ , or  
 $-\text{NHCO-C}_{1-3}\text{alkyl}$ , then at least one of  $\text{R}^{4'}$ ,  $\text{R}^{6'}$  and  $\text{R}^{7'}$  is not hydrogen; or alternatively,  
wherein at least two of  $\text{R}^4$ ,  $\text{R}^6$  or  $\text{R}^7$  is not hydrogen;

$\text{R}^{2''}$ ,  $\text{R}^3$ ,  $\text{R}^{4''}$ ,  $\text{R}^{5''}$  and  $\text{R}^6$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OH}$ ;  $-\text{OR}^2$ ;  
 $-\text{NR}^2\text{R}^3$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ;  $\text{C}_{1-5}$  alkoxy; oxime, hydrazine,  $-\text{C}_{1-5}$  alkyl or  
alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  
 $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}$  thioether or  $-\text{C}_{1-5}$  alkoxy,

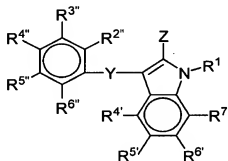
$\text{Z}$  is  $-\text{CN}$ ,  $-\text{C(=W)NR}^2\text{R}^3$ ,  $-\text{C(=O)R}^3$ ,  $-\text{C(=O)OR}^3$ ,  $-\text{CR}^2\text{R}^2\text{-S(O)}_n\text{-R}^3$ ,  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ,  
 $\text{CR}^2\text{R}^2\text{-CO-R}^2$  or substituted or unsubstituted lower alkyl;

$\text{Y}$  is  $\text{O}$ ;  $\text{S(O)}$  or  $\text{S(O)}_2$ ;

each  $\text{W}$  is independently  $\text{O}$ ;  $\text{S}$ ;  $-\text{N-CN}$  or  $-\text{N-OR}^2$ ; and

each  $\text{R}^2$  is independently hydrogen or  $\text{C}_{1-3}$  alkyl.

Claim 31 (currently amended): A method for the treatment of an HIV infection in a host  
comprising administering to said host an effective anti-HIV treatment amount of a compound  
of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^7$  are each independently H; halo;  $-NO_2$ ;  $-CN$ ;  $-OR^2$ ;  $-NR^2R^3$ ;

$-NHSO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ; oxime, hydrazine, or  $C_{1-3}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-3}$  alkoxy or  $C_{1-3}$  thioether, wherein if  $R^{6'}$  is  $F$ ,  $Cl$ ,  $Br$ ,  $-NO_2$ ,  $-CN$ ,  $-OR^2$ ,  $-NR^2R^2$ ,  $-NHSO_2-C_{1-3}alkyl$ , or  $-NHCO-C_{1-3}alkyl$ , then at least one of  $R^{4'}$ ,  $R^{6'}$  and  $R^{7'}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4'}$ ,  $R^{6'}$  or  $R^{7'}$  is not hydrogen;

$R^{6'}$  is H; halo;  $-NO_2$ ;  $-CN$ ;  $-NR^2R^3$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ; oxime, hydrazine, or  $C_{1-3}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-3}$  alkoxy or  $C_{1-3}$  thioether;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H; halo;  $-NO_2$ ;  $-CN$ ;  $-OR^2$ ;  $-NHSO_2-C_{1-3}alkyl$ ;  $-NHCO-C_{1-3}alkyl$ ; oxime, hydrazine,  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

Z is  $-C(=W)NR^2R^3$  or  $-C(=O)R^3$ ;  $-CR^2R^2NHR^2$ ,  $CR^2R^2-CO-R^2$  or substituted or unsubstituted lower alkyl;

Y is O or  $S(O)_n$ ;

each W is independently O; S;  $-N-CN$  or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl; and

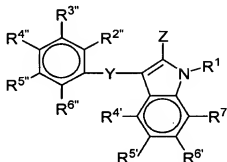
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 32 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NR}^2\text{R}^3$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine, or  $\text{C}_{1-3}$  alkyl or alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-3}$  alkoxy or  $\text{C}_{1-3}$  thioether, ~~wherein if  $R^{5'}$  is F, Cl, Br,  $-\text{NO}_2$ ,  $-\text{CN}$ ,  $-\text{OR}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ , or  $-\text{NHCO-C}_{1-3}\text{alkyl}$ , then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively,~~ wherein at least two of  $R^4$ ,  $R^6$  or  $R^7$  is not hydrogen;

$R^{2'}$ ,  $R^3$ ,  $R^{4'}$ ,  $R^{5'}$  and  $R^{6'}$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OH}$ ;  $-\text{OR}^2$ ;  $-\text{NR}^2\text{R}^3$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ;  $\text{C}_{1-5}\text{alkoxy}$ ; oxime, hydrazine,  $-\text{C}_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}$  thioether or  $-\text{C}_{1-5}$  alkoxy;

Z is  $-\text{C(=W)NR}^2\text{R}^3$  or  $-\text{C(=O)R}^3$ ;  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ,  $\text{CR}^2\text{R}^2\text{-CO-R}^2$  or substituted or unsubstituted lower alkyl;

Y is O or  $\text{S(O)}_n$ ;

each W is independently O; S;  $-\text{N-CN}$  or  $-\text{N-OR}^2$ ;

each  $\text{R}^2$  is independently hydrogen or  $\text{C}_{1-3}$  alkyl; and

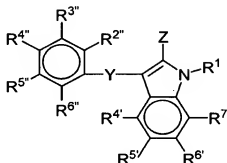
each  $\text{R}^3$  is independently  $\text{C}_{1-5}$  alkyl,  $\text{C}_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $\text{C(O)NR}^2\text{R}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$ ;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 33 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine,  $-\text{C}_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C}(\text{O})\text{H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}$  thioether or  $-\text{C}_{1-5}$  alkoxy,

~~wherein if  $R^{5''}$  is halo, then at least one of  $R^{4''}$ ,  $R^{6''}$  and  $R^{2''}$  is not hydrogen; or alternatively,~~ wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is  $-\text{C}(=\text{W})\text{NR}^2\text{R}^3$ ,  $-\text{C}(=\text{O})\text{R}^3$  or  $-\text{CR}^2\text{R}^2\text{NHR}^2$ ;

Y is O or  $\text{S}(\text{O})_n$ ;

each W is independently O; S;  $-\text{N-CN}$  or  $-\text{N-OR}^2$ ;

each  $\text{R}^2$  is independently hydrogen or  $\text{C}_{1-3}$  alkyl;

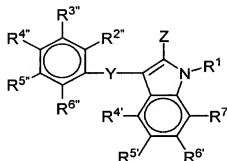
each  $\text{R}^3$  is independently  $\text{C}_{1-5}$  alkyl,  $\text{C}_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $\text{C}(\text{O})\text{NR}^2\text{R}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C}(\text{O})\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C}(=\text{W})\text{-NH}(\text{CH}_2)_p\text{-amino acid}$ ;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 34 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R<sup>1</sup> is hydrogen;

R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are each independently H or halo;

R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently H; halo; -NO<sub>2</sub>; -CN; -OR<sup>2</sup>; -NHSO<sub>2</sub>-C<sub>1-3</sub>alkyl; -NHCO-C<sub>1-3</sub>alkyl; oxime, hydrazine, -C<sub>1-5</sub> alkyl or alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, -NR<sup>2</sup>R<sup>2</sup>, -C<sub>1-5</sub> thioether or -C<sub>1-5</sub> alkoxy,

~~wherein if R<sup>5'</sup> is halo, then at least one of R<sup>4'</sup>, R<sup>6'</sup> and R<sup>7'</sup> is not hydrogen; or alternatively,~~ wherein at least two of R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are not hydrogen;

Z is -C(=O)R<sup>3</sup>;

Y is O or S(O)<sub>n</sub>;

each W is independently O; S; -N-CN or -N-OR<sup>2</sup>;

each R<sup>2</sup> is independently hydrogen or C<sub>1-3</sub> alkyl;

each R<sup>3</sup> is independently C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of C(O)NR<sup>2</sup>R<sup>2</sup>, -NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(=W)-NH(CH<sub>2</sub>)<sub>p</sub>-amino acid);

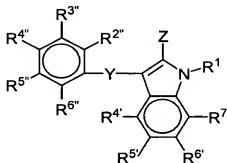
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 35 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):





or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo;

$R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H; halo; or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

~~wherein if  $R^5$  is halo, then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively,~~ wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is  $-C(=W)NR^2R^3$  or  $-C(=O)R^3$ ;

Y is O or  $S(O)_n$ ;

each W is independently O; S;  $-N-CN$  or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl;

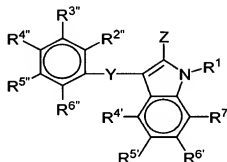
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 36 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R<sup>1</sup> is hydrogen;

R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are each independently H or halo;

R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently H or -C<sub>1-5</sub> alkyl or alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, -NR<sup>2</sup>R<sup>2</sup>, -C<sub>1-5</sub> thioether or -C<sub>1-5</sub> alkoxy,

~~wherein if R<sup>5'</sup> is halo, then at least one of R<sup>4'</sup>, R<sup>6'</sup> and R<sup>7'</sup> is not hydrogen; or alternatively,~~ wherein at least two of R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are not hydrogen;

Z is -C(=W)NR<sup>2</sup>R<sup>3</sup> or -C(=O)R<sup>3</sup>;

Y is O or S(O)<sub>n</sub>;

each W is independently O or S;

each R<sup>2</sup> is independently hydrogen or C<sub>1-3</sub> alkyl;

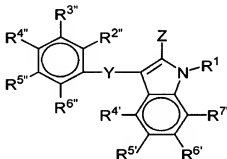
each R<sup>3</sup> is independently C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of C(O)NR<sup>2</sup>R<sup>2</sup>, -NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(=W)-NH(CH<sub>2</sub>)<sub>p</sub>-amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5;

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 37 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo, wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$  or  $R^7$  is not hydrogen;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine,  $-\text{C}_{1-5}\text{ alkyl}$  or  $-\text{C}_{1-5}\text{ alkenyl}$  optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C}(\text{O})\text{H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}\text{ thioether}$  or  $-\text{C}_{1-5}\text{ alkoxy}$ ;

Z is  $-\text{C}(=\text{W})\text{NR}^2\text{R}^3$  or  $-\text{C}(=\text{O})\text{R}^3$ ;

Y is O or  $\text{S}(\text{O})_n$ ;

each W is independently O; S;  $-\text{N-CN}$  or  $-\text{N-OR}^2$ ;

each  $\text{R}^2$  is independently hydrogen or  $\text{C}_{1-3}\text{ alkyl}$ ;

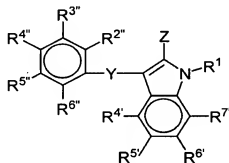
each  $\text{R}^3$  is independently  $\text{C}_{1-5}\text{ alkyl}$ ,  $\text{C}_{1-5}\text{ alkenyl}$ , aryl or heterocycle unsubstituted or substituted with one or more of  $\text{C}(\text{O})\text{NR}^2\text{R}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C}(\text{O})\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C}(=\text{W})\text{-NH}(\text{CH}_2)_p\text{-amino acid}$ ;

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 38 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo, wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$  or  $R^7$  is not hydrogen;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

Z is  $-C(=W)NR^2R^3$  or  $-C(=O)R^3$ ;

Y is O or  $S(O)_n$ ;

each W is independently O; S;  $-N-CN$  or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl; and

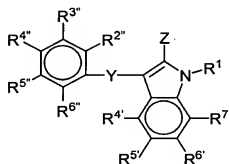
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is independently 0, 1, 2, 3, 4 or 5.

Claim 39 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are each independently H or halo, wherein at least two of  $R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$  or  $R^{7'}$  is not hydrogen;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

Z is  $-C(=O)R^3$ ;

Y is O or  $S(O)_n$ ;

each W is independently O; S;  $-N-CN$  or  $-N-OR^2$ ;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl;

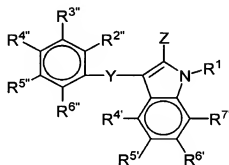
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each  $n$  is independently 0, 1 or 2;

each  $p$  is independently 0, 1, 2, 3, 4 or 5; and

each  $m$  is 1, 2, 3, 4 or 5.

Claim 40 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are each independently H or halo;

$R^{2''}$ ,  $R^{3''}$ ,  $R^{4''}$ ,  $R^{5''}$  and  $R^{6''}$  are each independently H or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-OH$ ,  $-SH$ ,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

wherein if  $R^{5'}$  is halo, then at least one of  $R^{4'}$ ,  $R^{6'}$  and  $R^{7'}$  is not hydrogen; or alternatively, wherein at least two of  $R^{4'}$ ,  $R^{5'}$ ,  $R^{6'}$ ,  $R^{7'}$  are not hydrogen;

Z is  $-C(=W)NR^2R^3$  or  $-C(=O)R^3$ ;

Y is O or  $S(O)_n$ ;

each W is independently O;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl;

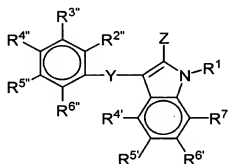
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each  $n$  is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 41 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

R<sup>1</sup> is hydrogen;

R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are each independently H or halo, wherein at least two of R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup> or R<sup>7'</sup> is not hydrogen;

R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently H or -C<sub>1-5</sub> alkyl or alkenyl optionally substituted with one or more of -OH, -SH, -C(O)H, -COOH, halogen, -NR<sup>2</sup>R<sup>2</sup>, -C<sub>1-5</sub> thioether or -C<sub>1-5</sub> alkoxy,

Z is -C(=W)NR<sup>2</sup>R<sup>3</sup>;

Y is O or S(O)<sub>n</sub>;

each W is independently O or S;

each R<sup>2</sup> is independently hydrogen or C<sub>1-3</sub> alkyl;

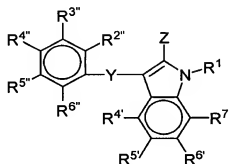
each R<sup>3</sup> is independently C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of C(O)NR<sup>2</sup>R<sup>2</sup>, -NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(O)NR<sup>2</sup>R<sup>2</sup>, -(CH<sub>2</sub>)<sub>m</sub>C(=W)-NH(CH<sub>2</sub>)<sub>p</sub>-amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 42 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo;

$R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of -OH, -SH,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

~~wherein if  $R^2$  is halo, then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively,~~ wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is  $-C(=W)NR^2R^3$ ;

Y is  $S(O)_n$ ;

each W is independently O;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl;

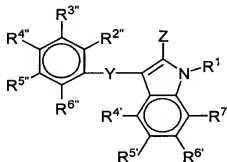
each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 43 (currently amended): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo;

$R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine,  $-\text{C}_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}$  thioether or  $-\text{C}_{1-5}$  alkoxy,

~~wherein if  $R^5$  is halo, then at least one of  $R^4$ ,  $R^6$  and  $R^7$  is not hydrogen; or alternatively,~~ wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are not hydrogen;

Z is  $-\text{C(=O)R}^3$ ;

Y is  $\text{S(O)}_n$ ;

each W is independently O;

each  $R^2$  is independently hydrogen or  $\text{C}_{1-3}$  alkyl;

each  $R^3$  is independently  $\text{C}_{1-5}$  alkyl,  $\text{C}_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $\text{C(O)NR}^2\text{R}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$ ;

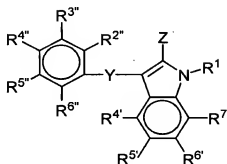
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 44 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):





or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are independently H or halo, wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$  or  $R^7$  is not hydrogen;

$R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H; halo;  $-\text{NO}_2$ ;  $-\text{CN}$ ;  $-\text{OR}^2$ ;  $-\text{NHSO}_2\text{-C}_{1-3}\text{alkyl}$ ;  $-\text{NHCO-C}_{1-3}\text{alkyl}$ ; oxime, hydrazine,  $-\text{C}_{1-5}$  alkyl or alkenyl optionally substituted with one or more of  $-\text{OH}$ ,  $-\text{SH}$ ,  $-\text{C(O)H}$ ,  $-\text{COOH}$ , halogen,  $-\text{NR}^2\text{R}^2$ ,  $-\text{C}_{1-5}$  thioether or  $-\text{C}_{1-5}$  alkoxy,

Z is  $-\text{C(=O)R}^3$ ;

Y is O or  $\text{S(O)}_n$ ;

each W is independently O;

each  $R^2$  is independently hydrogen or  $\text{C}_{1-3}$  alkyl; and

each  $R^3$  is independently  $\text{C}_{1-5}$  alkyl,  $\text{C}_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $\text{C(O)NR}^2\text{R}^2$ ,  $-\text{NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(O)NR}^2\text{R}^2$ ,  $-(\text{CH}_2)_m\text{C(=W)-NH(CH}_2)_p\text{-amino acid}$ ;

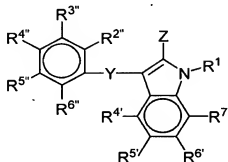
each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claim 45 (previously presented): The method of any one of claims 19 or 24 wherein  $R^1$  is hydrogen.

Claim 46 (previously presented): A method for the treatment of an HIV infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of formula (I):



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is hydrogen;

$R^4$ ,  $R^5$ ,  $R^6$ ,  $R^7$  are each independently H or halo, wherein at least two of  $R^4$ ,  $R^5$ ,  $R^6$  or  $R^7$  is not hydrogen;

$R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$  are each independently H or  $-C_{1-5}$  alkyl or alkenyl optionally substituted with one or more of -OH, -SH,  $-C(O)H$ ,  $-COOH$ , halogen,  $-NR^2R^2$ ,  $-C_{1-5}$  thioether or  $-C_{1-5}$  alkoxy,

Z is  $-C(=W)NR^2R^3$ ;

Y is O or  $S(O)_n$ ;

each W is independently O;

each  $R^2$  is independently hydrogen or  $C_{1-3}$  alkyl; and

each  $R^3$  is independently  $C_{1-5}$  alkyl,  $C_{1-5}$  alkenyl, aryl or heterocycle unsubstituted or substituted with one or more of  $C(O)NR^2R^2$ ,  $-NR^2R^2$ ,  $-(CH_2)_mC(O)NR^2R^2$ ,  $-(CH_2)_mC(=W)-NH(CH_2)_p$ -amino acid);

each n is independently 0, 1 or 2;

each p is independently 0, 1, 2, 3, 4 or 5; and

each m is 1, 2, 3, 4 or 5.

Claims 47-48 (Cancelled)

Claim 49 (previously presented): The method of any one of claims 19 or 24 wherein Z is  $-C(=O)NH_2$ ;  $-C(=W)-NH_2$ ;  $-C(=O)NHR^2$ ;  $-C(=W)NHR^2$ ;  $-C(=O)NR^2R^3$ ;  $-C(=W)NR^2R^3$ ;  $-C(=W)NH(CH_2)_p$ -(amino acid);  $-C(=O)R^3$ ;  $-C(=O)OR^3$ ;  $-C(=O)OH$ ;  $-C(=W)OH$ ;  $-C(=O)OR^2$ ;  $-C(=W)-OR^2$ .

Claim 50 (previously presented): The method of any one of claims 19 or 24 wherein Z is  $-C(=O)NH_2$ ;  $-C(=O)NHR^2$  or  $-C(=O)NR^2R^3$ .

Claim 51 (previously presented): The method of any one of claims 19 or 24 wherein Y is SO<sub>2</sub>.

Claim 52 (previously presented): The method of any one of claims 19 or 24 wherein R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup> and R<sup>7'</sup> are each independently H or halo.

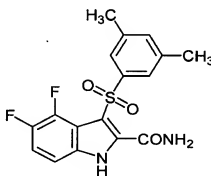
Claim 53 (previously presented): The method of any one of claims 19 or 24 wherein at least two of R<sup>4'</sup>, R<sup>5'</sup>, R<sup>6'</sup>, R<sup>7'</sup> are not hydrogen.

Claim 54 (previously presented): The method of any one of claims 19 or 24 wherein R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently optionally substituted or unsubstituted branched or unbranched alkyl, alkenyl or alkynyl.

Claim 55 (previously presented): The method of any one of claims 19 or 24 wherein R<sup>2''</sup>, R<sup>3''</sup>, R<sup>4''</sup>, R<sup>5''</sup> and R<sup>6''</sup> are each independently unsubstituted unbranched alkyl.

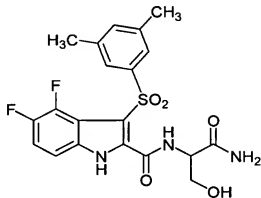
Claim 56 (previously presented): The method of any one of claims 19 or 24 wherein R<sup>1</sup> is hydrogen.

Claim 57 (previously presented): The A method of any one of claims 19 or 24 for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound wherein the compound is a compound of the formula



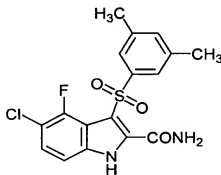
or a pharmaceutically acceptable salt thereof.

Claim 58 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



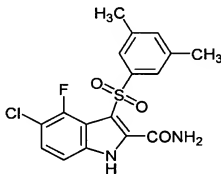
or a pharmaceutically acceptable salt thereof.

Claim 59 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



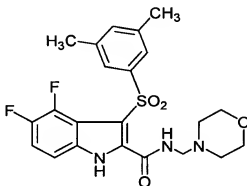
or a pharmaceutically acceptable salt thereof.

Claim 60 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



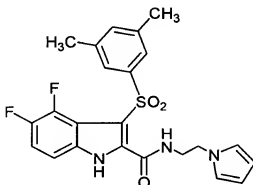
or a pharmaceutically acceptable salt thereof.

Claim 61 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



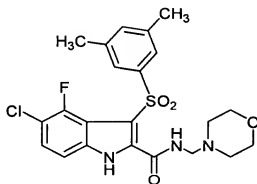
or a pharmaceutically acceptable salt thereof.

Claim 62 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



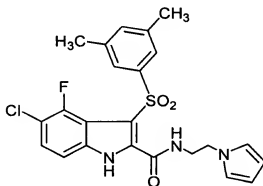
or a pharmaceutically acceptable salt thereof.

Claim 63 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



or a pharmaceutically acceptable salt thereof.

Claim 64 (previously presented): A method for the treatment of an HIV-infection in a host comprising administering to said host an effective anti-HIV treatment amount of a compound of the formula



or a pharmaceutically acceptable salt thereof.

Claim 65 (previously presented): The method of any one of claims 57-64, wherein the HIV is resistant to one or more reverse transcriptase inhibitor (s), in combination and/or alternation with one or more other anti-HIV agent, optionally in a pharmaceutically acceptable carrier or diluent.